

## **REMARKS**

Claims 1 to 35 are pending. Claims 1 to 35 were rejected. Claims 1, 7, 12, 14, 25, 28, 29, and 32 have been amended above. The amendments correct minor errors objected to by the Examiner, or otherwise better present the invention to the Office, and are not believed to require additional searching. Applicant respectfully requests that the amendments be entered. No new matter has been added.

Applicant requests reconsideration and allowance of the present application for the following reasons.

### **Rejections under 35 U.S.C. § 112, second paragraph**

**Claims 1 to 13, 25 to 27, 29 to 31, and 32 to 35, were rejected under 35 U.S.C. § 112, second paragraph, for indefiniteness.**

Specifically, claims 1, 2, 29, and 32 were rejected for containing features lacking antecedent basis. Appropriate corrections have been made via the above-submitted claim amendments, and Applicant respectfully requests that the rejections be withdrawn.

Claims 1, 7, 12, and 25 were rejected for reciting “comparing successively downloaded versions of the snapshots to detect at least one difference between them,” or similar language. While Applicant respectfully disagrees with the rejection, in an effort to expedite allowance, Applicant has amended the claim language to better present the invention. Applicant respectfully submits that the terminology in the amended claims would be well understood by one of skill in the art, and requests that the rejections be withdrawn.

Claims 7, 12, and 25 were rejected for reciting “determining an overall backward compatibility score of successive versions based on the detected difference ratings,” or similar language. While Applicant respectfully disagrees with the rejection, in an effort to expedite allowance, Applicant has amended the claim language to better present the invention. Applicant respectfully submits that the terminology in the amended claims would be well understood by one of skill in the art, and requests that the rejections be withdrawn.

Accordingly, the remaining claims depend from one of claims 1, 7, 12, 25, and 29, and are allowable for, respectively, the same reasons. Applicant respectfully requests withdrawal of the rejection of claims 1 to 13, 25 to 27, 29 to 31, and 32 to 35.

**Rejections under 35 U.S.C. § 103(a)**

**Claims 1 to 28, 32, 33, and 35 were rejected under 35 U.S.C. § 103(a) over U.S. Patent No. 6,986,132 B1 (“Schwabe”), in view of U.S. Patent No. 7,069,474 B2 (“Atallah”), and in further view of “Automated Component Ensemble Evaluation” (“Boonsiri”).** Applicant respectfully traverses the rejection and submits that each pending claim is patentable over the cited art.

Amended claim 1 recites “issuing an alert message to registered authors of the software component in the software design environment.” Independent claims 7, 12, 14, 25, 28, and 32 also recite, *inter alia*, features substantially similar to the above quoted feature of claim 1. None of the cited art teaches or suggests this subject matter. As the Office admits (Office Action at 5-6), Schwabe and Atallah do not address a multi-author design environment and thus do not teach this claim feature. While the Office contends that Atallah teaches sending an alert indicating the risk of binary compatibility failure to users of the risk management system (Office Action at 5), this is clearly not the same as issuing an alert message to registered authors of the software component.

To overcome these deficiencies of Schwabe and Atallah combination, Boonsiri is asserted as teaching a multi-author design environment. Boonsiri appears to generally disclose “system integrators [who] provide a manifest that defines the functional requirements of the components as well as any overriding constraints on how the components are integrated” into the system. Boonsiri at sec. 3, para. 4, pg. 42. Applicant respectfully disagree with the Office’s characterization of a system integrator as an author of a component in a multi-author software design environment. To the contrary, nothing in Boonsiri discusses multiple authors of a software component. Furthermore, Boonsiri does not disclose “issuing an alert message to registered authors of the software component in the software design environment.” The Boonsiri disclosure discusses integrating components to form a system. Just like the other cited prior art, the user (i.e. the system integrator of Boonsiri), is evaluating pre-existing software components. Boonsiri does not disclose the claimed features and context of claim 1, that require issuing an alert message to “registered **authors of the software component in the software design environment.**” None of the cited prior art, alone or in combination, discloses any features related to the actual authors of the disclosed components, or the multi-author software design environment those components are created in.

For at least those reasons, claim 1 should be allowed.

Additionally, neither Schwabe nor Atallah teaches “rating each detected difference [between snapshots] according to a backward compatibility metric.” The Office Action asserts that the rating of each binary file in Atallah corresponds to this element. Applicant respectfully disagrees. Atallah states only that the:

risk assessment system 210 examines the output of the appcert application to determine whether the binary file invokes any unsupported symbols[, or] ... invokes any libraries that have a known problem[ or behavioral change, or] ... performs any static links to unchanged system libraries ... [and] then a record is generated indicating that the binary file has failed the binary compatibility test[, or] presents a high [or low] risk of failing the binary compatibility test... The process ... may be repeated for each binary file received in the input file to generate a series of records indicating the likelihood that each binary file ... will suffer a binary compatibility failure with the ABI it was tested against.

Atallah, col. 6, line 55 to col. 7, line 9. In Atallah’s system, the compatibility of a binary file is given a rating. The ratings above, each associated with a broad category, are the only ratings issued by Atallah. Atallah does not, therefore, rate “**each** detected difference.” For example, whether the binary invokes one unsupported symbol or a million unsupported symbols, the binary is only given one rating of “failed.” This may rate each broad category of differences, but not each difference, as claimed. Figure 5 of the present specification, and the accompanying text, provides a clear description of the meaning of “each detected difference.” For example, paragraph 43 states that:

method 500 compares the element's attributes, and records **any detected differences** (550). At the same time (or alternatively in a separate step, as discussed in FIG. 4, step 440), the method also evaluates the detected differences according to a backward compatibility metric. Method 500 then advances to the next element in the baseline snapshot (560) and repeats the process (520). **After all of the elements** in the baseline snapshot have been examined and/or compared to corresponding elements in the updated snapshot, method 500 determines whether any elements remain in the updated snapshot that should be considered.

From this it is clear that each “element” is examined, and a record made of any detected differences for the attributes of each “element.” Further, the “elements” make up the “snapshot.” In paragraph 20, a description of the elements (i.e., components of the snapshots) is provided:

According to an embodiment, a snapshot is a recorded compilation of software declarations for selected public or externally-accessible data objects and subroutines contained in a software library or repository.

Depending on the particular programming language(s) used, a data object may be called other names, such as "parameter," "data structure," "data element," "field," "variable," "object," "class," or "property." Similarly, a subroutine may be called "function," "procedure," "method," or other terms known in the art.

These items that comprise a snapshot are not the broad categories of Atallah, and thus a “detected difference,” as recited in the context of claim 1, also cannot be one of the broad categories of Atallah. For at least this additional reason, claim 1 should be allowable.

Claims 2 to 6, 33, and 35 ultimately depend from claim 1 and are allowable for at least the same reasons.

As independent claims 7, 12, 14, 25, 28, and 32 recite, *inter alia*, claim features substantially similar to those argued with respect to claim 1, they should be allowed for at least the same reasons. Dependent claims 8 to 11, 13, 15 to 24, 26, and 27 depend from one of claims 7, 12, 14, 25, and 28, respectively, and are therefore allowable for at least the same reasons.

Additionally, claim 8 recites “alert messages [which] include[] a summary of each detected difference.” While the Office asserts that this feature is taught by Atallah (Office Action at 9), Atallah states only:

The process ... may be repeated for each binary file received in the input file to generate a series of records indicating the likelihood that each binary file ... will suffer a binary compatibility failure with the ABI it was tested against... It will be appreciated that the binary file may be tested against multiple ABIs. This information may be formatted as a report and transmitted to the end user.

Atallah, col. 7, lines 5-16. A report of the rated compatibility of each tested ABI, **even one that contains a result for a few broad categories**, does not teach a report of the rated compatibility of every element of a snapshot that had a detected difference. **For example, whether an ABI has one or a million unsupported symbols, Atallah will create the exact same report.** Accordingly, for the reasons argued with respect to claim 1, Atallah fails to teach or suggest the “each detected difference” error report, and claim 8 is believed allowable.

**Claims 29 to 31 were rejected under 35 U.S.C. § 103(a) over Schwabe in view of Atallah, further in view of Boonsiri, and further in view of U.S. Patent No. 6,898,768**

(**“Theodossy”**). Applicant respectfully traverses the rejection and submits that each pending claim is patentable over the cited art.

Claims 29 to 31 depend from claim 28, and thus are believed allowable over the combination of Schwabe, Atallah, and Boonsiri, for at least the same reasons as for claim 28. The combination of those references with Theodossy does not cure the deficiencies, and thus, does not teach or disclose all of the features of claims 29 to 31. The Office cites Theodossy as teaching a method for compatibility receiving a compatibility triggering event and verifying compatibility in response to the triggering event. However, nothing in Theodossy discloses or suggests a method to “issue an alert message including the overall backward compatibility to registered **authors** of a software component associated with the software interface in the software design environment” – a feature also missing from each of the three other cited references. Accordingly, for at least this reason, claims 29 to 31 should be allowed.

**Claim 34 was rejected under 35 U.S.C. § 103(a) over Schwabe in view of Atallah, further in view of Boonsiri, and further in view of U.S. Patent No. 7,289,973 B2 (“Kiessig”)**. Applicant respectfully traverses the rejection and submits that each pending claim is patentable over the cited art.

Claim 34 depends from claim 1, and thus is believed allowable over the combination of Schwabe, Atallah, and Boonsiri, for at least the same reasons as for claim 1. The combination of those references with Kiessig does not cure the deficiencies, and thus, does not teach or disclose all of the features of claim 34. The Office cites Kiessig as teaching a method for storing snapshots in a snapshot history. However, nothing in Kiessig discloses or suggests a method of “issuing an alert message to registered **authors** of the software component in the software design environment.” Accordingly, for at least this reason, claim 34 should be allowed.

Applicant respectfully submits that claims 1 to 35 are in condition for allowance, and respectfully requests that the rejections under 35 U.S.C. §§ 103(a), 112, of those claims be withdrawn.

### **CONCLUSION**

In view of all of the above, it is believed that the rejections have been obviated, and that claims 1 to 35 are allowable. It is therefore respectfully requested that any outstanding rejections be withdrawn, and that the present application issue as early as possible.

If for any reason the Examiner believes that contact with Applicant's attorney would advance the prosecution of this application, he or she is invited to contact the undersigned at the number given below.

Although not believed necessary, the Office is hereby authorized to charge any fees required under 37 C.F.R. § 1.16 or § 1.17 or credit any overpayments to Deposit Account No. 11-0600.

Respectfully submitted,

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